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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,815

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Gerrit Frederik Magdalena De Poortere

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BRIARCLIFF MANOR, NY 10510

EXAMINER

MONIKANG, GEORGE C

ART UNIT

PAPER NUMBER

2614

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/565,815	<b>Applicant(s)</b> DE POORTERE, GERRIT FREDERIK MAGDALENA	
	<b>Examiner</b> GEORGE C. MONIKANG	<b>Art Unit</b> 2614	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 January 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 5-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 10/565,815.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-2 & 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over watanabe et al, US Patent 5434926, in view of Hermann, US Patent 6360187 B1, and further in view of Official notice. (Watanabe et al is cited in IDS filed 8/15/2007)

Re Claim 1, Watanabe et al discloses an audio conditioning apparatus for conditioning an audio signal to be output (*abstract*), said audio conditioning apparatus comprising: an input for receiving the audio signal (*fig. 2: 11*); a noise characterizing unit determining a noise level of environmental noise in a mid-range frequency noise band (*fig. 2: 12b; col. 3, lines 47-53: noises in mid-range frequency band are detected*); a volume amplification unit to said input for amplifying a volume of the audio signal for all frequencies of the audio signal by a volume gain in dependence on the noise level in the mid-range frequency noise band (*fig. 2: 14b; col. 3, line 61 through col. 4, line 6: senses the noise of the midrange frequency band and compensates for with an appropriate gain obtained from figure 2: 13*), a further noise characterizing unit determining a further noise level of the environmental noise in a bass frequency noise band or a treble frequency noise band (*fig. 2: 12a & 12c; col. 3, lines 42-46 & lines 54-59: senses the noises of each the low frequency band and high frequency band and*

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compensates for them by increasing the amplitude based on gain from the volume correction of figure 2: 13) and a further amplification unit amplify coupled to said volume amplification, unit for amplifying by a further gain the amplitude of frequency components in a bass frequency audio band a treble frequency audio band of the audio signaling dependence of the further noise level of the environmental noise in the base or treble frequency band, respectively to perceptually mask the environmental noise in the base frequency noise band or the treble frequency noise band from a respective base frequency or treble frequency audio band of the volume amplified audio signal (fig. 2: 14c; ; col. 3, line 61 through col. 4, line 6: amplifier 14c adjusts the gain with the effect of volume correction of figure 2: 13)), but fails to disclose a gain dispatcher unit coupled to said input for allocating a maximum allowable gain of the volume amplification unit and the further amplification unit on the basis of available headroom for amplification. However, Hermann discloses allocating a maximum allowable gain (available headroom) and a programmable gain that has to be within the limit of the maximum allowable gain (Hermann, fig. 7: 48-49; col. 4, lines 8-33). It would have been obvious to use the gain allocating capabilities of Hermann (Hermann, fig. 7: 48-49; col. 4, lines 8-33) to allocate maximal gain limits for the audio conditioning apparatus of Watanabe et al for the purpose of producing sound levels that could compensate for ambient noise. The combined teachings of Watanabe and Hermann fail to disclose wherein said mid-range frequency noise band being complementary to said base frequency noise band and said treble frequency noise band, covering frequencies not in said base frequency noise band and said treble frequency noise band. However, official notice is taken that

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both the concepts and advantages of using a frequency noise band such as a band pass filter are well known in the art. Thus it would have been obvious to utilize a band-pass filter as the mid-range frequency noise band in Watanabe et al since the frequency range of the band pass filter is set by a user thus giving the system of Watanabe et al more flexibility in noise compensation and thus more dynamic.

Re Claim 2, the combined teachings of Watanabe et al and Hermann disclose an audio conditioning apparatus as claimed in claim 1, wherein an upper limit of the bass frequency audio band substantially lies in the range of 60 to 150 Hz, and wherein a lower limit of the treble frequency audio band substantially lies in the range of 8 kHz to 12 kHz (Watanabe et al, col. 1, lines 50-57: as seen in col. 1, lines 50-57, these are common ranges of bass and treble frequencies).

Re Claim 8, the combined teachings of Watanabe et al and Hermann disclose an audio reproduction apparatus, comprising: a loudspeaker for reproduction of the audio signal (Watanabe et al, fig. 2: 14d); an access to an input audio signal on which the audio signal is based (Watanabe et al, abstract); and the audio conditioning apparatus (Watanabe et al, abstract) as claimed in claim 1.

Claims 9 & 10 have been analyzed and rejected according to claim 1.

1. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over watanabe et al, US Patent 5434926, Hermann, US Patent 6360187 B1 and Official notice as applied to claim 1 above, and further in view of Kuusama, US Patent 5509081. (Kuusama is cited in IDS filed 8/15/2007)

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Re Claim 3, the combined teaching of Watanabe et al, Hermann and Official notice disclose an audio conditioning apparatus as claimed in claim 1, but fail to disclose wherein said audio conditioning apparatus further comprises: a gain consistency unit is coupled to said noise characterizing unit and said further noise characterization unit for yielding a gain consistently varying in time, according to a predetermined mathematical criterion as taught in Kuusama (Kuusama, col. 3, lines 17-38). It would have been obvious to use the gain consistency unit of Kuusama (Kuusama, col. 3, lines 17-38) with the audio conditioning apparatus of Watanabe et al, Hermann and Official notice for the purpose of providing different time constants for the gain.

2. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over watanabe et al, US Patent 5434926, Hermann, US Patent 6,360,187 B1 and Official notice as applied to claim 1 above, and further in view of Bohn, US Patent 5046105. (Bohn is cited in IDS filed 8/15/2007)

Re Claim 5, the combined teaching of Watanabe et al, Hermann and Official notice disclose an audio conditioning apparatus as claimed in claim 1, but fail to disclose wherein the further amplification unit comprises a shelving filter as taught in Bohn (Bohn, col. 8, lines 56-60). It would have been obvious to use the amplification unit comprising a shelving filter of Bohn (Bohn, col. 8, lines 56-60) with the audio conditioning apparatus of Watanabe et al, Hermann and Official notice for the purpose

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of causing the amplitude versus frequency response characteristics of the audio signal to exhibit the shape of a shelf.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over watanabe et al, US Patent 5434926, Hermann, US Patent 6,360,187 B1 and Official notice as applied to claim 1 above, and further in view of Takahashi et al, US Patent 6891954 B2.

Re Claim 6, the combined teaching of Watanabe et al, Hermann and Official notice disclose the audio conditioning apparatus as claimed in claim 1, wherein said audio conditioning apparatus is connectable to a loudspeaker usable for reproduction of the audio signal (Watanabe et al, fig. 2: 14d), an environmental noise being measurable by a microphone (Watanabe et al, fig. 2: 11; col. 3, lines 29-32); but fail to disclose wherein said audio conditioning apparatus further comprises an active noise canceling unit for substantially canceling environmental noise in a cancellation band of frequencies as taught in Takahashi et al (Takahashi et al, abstract). It would have been obvious to use the noise canceling unit of Takahashi et al (Takahashi et al, abstract) with the audio conditioning apparatus of Watanabe et al, Hermann and Official notice for the purpose of canceling the surrounding noise.

Watanabe et al, Hermann and Takahashi et al fail to disclose the loudspeaker being a headphone. Official notice is taken that both the concepts and advantages of providing headphone loudspeakers are well known in the art. It would have been obvious to use headphones since they are commonly used as portable speakers.



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4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over watanabe et al, US Patent 5434926, Hermann, US Patent 6360187 B1, Official notice and Takahashi et al, US Patent 6891954 B2 as applied to claim 6 above, and further in view of Philipsson et al, US Patent 7006624 B1.

Re Claim 7, Watanabe et al, Hermann, Official notice and Takahashi et al disclose an audio conditioning apparatus as claimed in claim 6, but fail to disclose wherein said audio conditioning apparatus further comprises a distance measuring device for measuring a distance between the microphone and the loudspeaker as taught in Philipsson et al (*Philipsson et al, col. 4, lines 32-41*). It would have been obvious to use the distance measuring device of Philipsson et al (*Philipsson et al, col. 4, lines 32-41*) with the audio conditioning apparatus of Watanabe et al, Hermann and Takahashi et al for the purpose of controlling the gain.

Watanabe et al, Hermann, Takahashi et al and Philipsson et al fail to disclose the loudspeaker being a headphone. Official notice is taken that both the concepts and advantages of providing headphone loudspeakers are well known in the art. It would have been obvious to use headphones since they are commonly used as portable.

### **Contact**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GEORGE C. MONIKANG whose telephone number is (571)270-1190. The examiner can normally be reached on M-F. alt Fri. Off 7:30am-5:00pm (est).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George C Monikang/  
Examiner, Art Unit 2614

3/12/2010

/Vivian Chin/  
Supervisory Patent Examiner, Art Unit 2614